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# Do Energy Prices drive Inflation in South Africa? An unrestricted VAR Approach

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## ABSTRACT

*This study was aimed at investigating the effects of energy prices on inflation in South Africa. This was achieved by means of econometric analysis and annual time series data spanning from 1994 to 2020. The findings revealed that electricity tariffs and petrol prices exhibit a positive effect on inflation in South Africa. On the contrary, interest rates and the exchange rate as control variables were found to have a negative effect on the inflation rate. The impulse response function indicated that inflation responds positively to innovations in petrol prices, electricity tariffs and money supply in the medium and long term but responds negatively to innovations in interest rates and exchange rates. Further to this, the variance decomposition function revealed that variations in inflation are largely explained by its own innovations and partially explained by innovations in petrol prices, money supply and interest rates. Lastly, the granger causality analysis showed no evidence of causality between inflation and explanatory variables during the specified period. Given that energy prices place upward pressure on inflation, the study recommends a review of the current fuel and electricity tariff structure to provide the much-needed relief to households and businesses.*

**Keywords**

Energy Prices, Inflation, South Africa, VAR Approach

**JEL Classification**

B22, B27, C13, E31, Q4

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## 1. Introduction and background

The Covid19 pandemic and the corresponding volatility in commodity markets, particularly the energy markets, has renewed interest in the dynamic link between energy price movements and economic performance (Kenny, 2004). The cost of living in South Africa is undoubtedly skyrocketing. For example, in recent months, energy prices have accelerated markedly and placed upward pressure on inflation. According to StatsSA (2021) petrol prices were increased by 40.5% in December 2021 as compared to 2020. The price of petrol for the first time in history has hit the R20 bar, as the price of inland 95-octane petrol raised to R20.29 per litre in December 2021. Oil prices have also been on the rise, while the South African rand against the US dollar has been relatively stable. Electricity tariffs are no exception. In the past 13 years, electricity prices increased by 307%, surpassing inflation. State utility "Eskom" has applied for an electricity price increase of 20.5% for the 2023 financial year, which was effective on the 1st of April 2022. Meanwhile, on 5 March 2021, the National Energy Regulator of South Africa (NERSA) approved a hike of 15.6% for individual households and 17.8% for municipalities, which was thereafter implemented on the 1st of April 2021 and 1st July 2021 respectively (NERSA, 2021). According to Langager (2013), inflation can be defined as the general rise in prices in general. A major concern for policy makers worldwide is the rising energy prices and subsequent high inflation rates which erode economic growth and domestic investment. Rizvi and Sahminan (2020) argue that the worst is yet to come for private households in terms of price increases for natural gas and electricity.

Energy prices were the main drivers of inflation in 2021. From an economic perspective, higher energy prices have the potential to slow economic recovery (Jackson, 2005). Energy prices are a vital instrument in determining inflation and are one of the most salient costs for households and businesses. A question remains as to whether the recent energy price movements are permanent or transitory. The price movements can be expected to have bigger implications for growth and inflation given that higher energy prices might have an effect on supply chains, profit margins and the likelihood for pass through to consumer prices and the wage bargaining process (Nkomo, 2005). Not with standing, the energy price dynamics play an important role in the context of climate transition and in terms of the commercial viability of longer-term investments. Given the current situation, there is a strong need for the transition from fossil fuels to renewable energy sources such as solar, hydro and wind energy. Nuclear energy has likewise yielded positive returns in countries that have invested in it, although it requires huge capital injections and technical know-how (AGAMA, 2003).

The relationship between energy prices and inflation is of paramount importance for the

South African economy (Devpura and Narayan, 2020). Notably, in terms of income, South Africa is the most unequal country in the world. Ultimately, this implies that inflation disproportionately affects the poor population that does not have enough income to keep up with increases in energy and consequently food prices (NERT, 2008). Furthermore, South Africa is an oil importing country and as a result, the country is exposed to external shocks of rising energy prices. The South African government since 1994, has been firm about balancing macroeconomics in order to attract investors, reduce the budget deficit and fight inflation through interest rates (AEJ, 2005).

Spalding-Fecher (2002; 5) notes that "concerns around energy security led the apartheid government to develop a synthetic fuel programme to meet demand and to lessen the country's dependence on energy imports". Imported crude oil accounts for 22% of primary energy used mainly by the transport sector. South Africa's massive investment in the 1960s and 1970s in coal-fired power plants left the national utility with large excess capacity in the 1980s and 1990s (NERSA, 2002). The excess capacity has helped to keep electricity prices low, but it is now practically exhausted (Eskom 2000). The energy sector in South Africa has been at the heart of policy debates. This is because, energy generation and distribution are crucial for the well-functioning of the economy. Sustained economic growth is vital to job creation and foreign direct investment. It is for this reasons that this study aims to examine the effect of energy prices on inflation in South Africa. Earlier studies (e.g., Rangasamy, 2017; Madito and Odhiambo, 2018; Rafiq, 2014) have isolated energy variables (i.e., electricity tariffs and oil price) to assess the drivers of inflation, a gap which this study aims to fill. Throughout the world, energy prices are on the increase which directly impacts input prices, transport fair and other aspects of the supply chain leading to an increase in inflation. The paper has addressed the phenomena of inflation in such a hard time and is the need of the day to investigate such a topic in order to identify and understand the policy events that resulted in an increase in energy prices globally.

## 2. Literature Review

### 2.1 Theoretical Literature

Theoretical considerations form an integral part of this study to capture views from different schools of thought, such as the Keynesian, monetarists, post-Keynesian, and new classical school of thought. As one of the key macroeconomic variables in South Africa (and the global economy alike), inflation is normally monitored closely by policymakers, notably the central banks. In monetary economics, as Baumann, Rossi and Volkmannx (2021) indicated, inflation is an important monetary phenomenon. According to monetarists, inflation is induced by an increase in the quantity of money at a faster rate than output growth

(i.e., an excess of money stock over the rate of output growth) in the economy (Moosa, 1982) and (Branson, 1975). An important implication of the monetarist model stated by the latter author is that the national rate of inflation ultimately converges to the world inflation rate. The analysis of inflation as a monetary phenomenon does not specify the underlying behaviour of individuals that coincide with the inflation rate (Colander, 1992).

Nevertheless, growth in money stock can be used to explain the consumers behaviour and the transmission to inflation. In this instance, the level of interest rate manipulated by central banks is a good starting point. Using the South African Reserve Bank (SARB) as an example, a reduction of repo rate result in greater amount of goods and services bought by individuals and businesses in the economy, and ultimately cause inflation. The Keynesian principle pertaining to "demand-pull inflation" (i.e., when aggregate demand surge because of increased consumption expenditure) is a pertinent referral to corroborate the views thereof. Energy products like electricity and fuel are amongst the mostly purchased consumer goods and services (as per statistics reported in the earlier section of this study) that drives inflation on the demand side. Moreover, the post-Keynesian Hongkil (2020) indicated that US inflation was more driven by supply-side variables in the past than demand-side variables recently.

The views of neoclassical economics reverberate the monetarists theory that attribute inflation rate to excessive growth in exogenous money supply. In controversy, the post-Keynesian economic theory considers money supply to be an endogenous variable (Susjan and Lah, 1997). Therefore, it appears that inflation can emerge from either demand-side or supply-side depending on the outcome of key macroeconomic variables. As far as this study is concerned, the extent to which energy prices drives inflation in South Africa depends on the data observed and methodology applied, while noting empirical results conversed in the next subsection.

### 2.2 Empirical Literature

This section discusses the findings of studies pertaining to inflation rate driven by energy prices. Considering the different sources of energy (such as, oil and electricity), scholars have scrutinised various determinants of inflation. For instance, Madito and Odhiambo (2018) examined the following factors that determine the movement of inflation; import prices, government expenditure, inflation expectations, labour costs, exchange rates and gross domestic product. Moreover, Rangasamy (2017) analysed the effect of petrol price movements on the rate of inflation in South Africa, using mid-1970 data as the implied starting point. As a result, granger causality tests and the autoregressive distributed lag

approach to co-integration testing revealed that a surge in the price of petrol had a significant bearing on the outcomes of inflation in South Africa. According to Madito and Odhiambo (2018), inflation is positively determined by government expenditure, import prices and labour costs. These results are based on quarterly data spanning from 1970Q1 to 2015Q4, discovered by the Error Correction Model.

Nonetheless, when the intensity of oil production process diminishes amid lower inflation environment, the influence of oil price shocks on inflation proved to be lacklustre (Balcilar, Uwilingiye and Gupta, 2018). In their study, the authors thereof have applied the time series data from January 1922 to July 2013 to examine the nexus between oil price and rate of inflation in South Africa. The results obtained through the symmetric and asymmetric dynamic conditional correlation GARCH revealed a positive link between inflation rate and oil price. However, such correlation was less robust owing to the commitment by South African Reserve Bank to stabilize inflation when external shocks hit the economy. Using a time-varying vector autoregression with stochastic volatility, Rafiq (2014) examined the impact on UK inflation resulting from oil price shocks. To estimate the results, the incorporated data covered the period from 1980s to 2013. The findings demonstrated that the oil price shock led to a significant surge of inflation rate in the UK.

In their study pertaining to oil shocks and the impact on the South African economy, Chisadza, Dlamini, Gupta and Modise (2016) found a short-lived significant impact of shock to oil supply on the inflation rate. Therefore, in the absence of monetary policy reaction, disturbances on the supply lead to a short-term increase in the inflation rate domestically. The methodology applied by the study thereof is called "a sign restriction-based structural Vector Autoregressive (VAR)", and the ultimate result emphasized the need to understand the source of the variations in oil price. Baghestani (2014) examined whether inflation expectation by consumers in the US are useful to accurately predict the direction of adjustments in energy prices. Using the period 1987 – 2012, a forecasting model was employed to generate the one-two-three quarter ahead random walk forecast of crude oil heating oil and gasoline. As a result, it was determined that expectations may contain predictive information that is useful for crude oil, heating oil and gasoline. Thus, the direction of change in energy prices was accurately predicted by change in expectations on inflation. Meanwhile, it is vital to consider the spread of energy prices to high food prices, resulting in inflation. As revealed by spectral BC causality test, the energy price index and food price indexes have a bidirectional causality (Kirikkaleli and Darbaz, 2021).

Against this background, oscillations in energy prices have become a pertinent factor that determines the performance of the macroeconomy. To understand the roots and transmission

mechanism leading to devastation on the overall economy, this study scrutinizes the sources of primary energy (namely, oil, petrol, and electricity prices). Therefore, intensifying the existing literature pertaining to energy prices and transmission to inflation rate in South Africa. As per the discussion of the empirical literature, most studies like Rangasamy (2017); Madito and Odhiambo (2018); Rafiq (2014), have isolated energy variables (i.e., petrol price and oil price) to assess the impact on inflation. Nevertheless, this study combines a few selected variables (specified in the methodology section) to serve as the basis for the significance of the study, using unrestricted VAR approach. This study is important as policy guidance amid high volatility and unstable inflation rate that present greatest risk of uncertainty in the economy.

## 3. Methodology

The study followed a quantitative research approach by making use of modern econometric techniques. The study employed annual time series data spanning from 1994 to 2020. The data was collected from reliable databases including the Department of Energy and Mineral Resources, St Louis Federal Reserve and World Development Indicators.

In line with Chisadza et al., (2016), our empirical model can be expressed in linear form as:

$$y_t = \beta_0 + \beta_1 AET_t + \beta_2 BPP_t + \beta_3 INT_t + \beta_4 EXR_t + \beta_5 MS_t + \varepsilon_t$$

Where:

y_t is the dependant variable represented by the Consumer Price Index

AEP is the Average electricity tariffs

BPP is the basic petrol price

INT is the nominal interest rates

EXR is the nominal exchange rate

MS is the broad money supply

ε_t is the error correction term

The study employed an unrestricted Vector autoregression approach consisting of the following steps: in the first step, the descriptive analysis and Augmented Dickey Fuller stationarity test were executed as pre-estimation tests. Following this, the standard Vector autoregression model was estimated to examine the effect of explanatory variable namely: electricity tariffs, petrol prices, interest rates, money supply and nominal exchange rate on the dependant variable. The variance decomposition and impulse response were later performed to evaluate the response of the inflation rate to shocks in each of the explanatory

variables. Furthermore, the granger causality analysis was executed to determine if energy prices cause inflation in South Africa.

## 4. Results and Discussion

This section provides a detailed discussion of the summary of findings obtained from the econometric analysis. This includes the descriptive analysis, stationarity analysis, standard VAR estimation, impulse response, variance decomposition and granger causality analysis. A summary of descriptive statistics is provided in Table 1 below.

**Table 01: Descriptive Statistics**

| | Inflation | Electricity tariffs | Petrol prices | Exchange rate | Money supply | Interest rate |
|---|---|---|---|---|---|---|
| Mean | 5.94 | 41.06 | 386.33 | 8.62 | 11.78 | 5.48 |
| Median | 5.64 | 19.80 | 372.83 | 7.55 | 11.90 | 4.81 |
| Maximum | 10.99 | 110.93 | 1136.58 | 16.45 | 20.70 | 12.6 |
| Minimum | 1.43 | 10.32 | 50.34 | 3.55 | 1.72 | 2.31 |
| Std. Dev. | 2.14 | 33.82 | 277.93 | 3.54 | 5.82 | 2.78 |
| Skewness | 0.25 | 0.78 | 0.69 | 0.62 | 0.02 | 1.21 |
| Kurtosis | 3.04 | 2.11 | 2.99 | 2.43 | 1.83 | 3.53 |
| Jarque-Bera | 0.28 | 3.59 | 2.12 | 2.08 | 1.55 | 6.95 |
| Probability | 0.87 | 0.17 | 0.346 | 0.35 | 0.46 | 0.03 |
| Observations | 27 | 27 | 27 | 27 | 27 | 27 |

*Source: Authors estimates*

Electricity tariffs averaged 41.1 between 1994 and 2020 while basic petrol prices averaged 386.3 during the same period. Inflation on the other hand, averaged 5.9 between 1994 and 2020 with a range between 1.4% and 10.9%. Petrol prices have proven to have a relatively higher standard deviation (277) followed by electricity tariffs (33.8), money supply (5.8), exchange rate (3.5), interest rates (2.78) and inflation (2.13). In general, higher standard deviations indicate that the data points are spread out while lower values of standard deviation indicate that the data points are closer to the mean. In respect of the skewness of the data, the data appears to be slightly skewed to the right. The variables were examined for unit root. The results are summarized in Table 2 below.

**Table 2: Stationarity analysis**

| Variable | Level | 1st Difference | 2nd Difference | Outcome |
|---|---|---|---|---|
| Inflation | -3.55* | -5.45* | - | D(0) |
| electricity tariffs | 4.15 | -2.15 | -6.99* | D(2) |
| Petrol prices | -1.76 | -6.37* | - | D(1) |

| | | | | |
|---|---|---|---|---|
| Exchange rate | 0.06 | -3.64* | - | D(1) |
| Interest rates | -2.11 | -5.96* | - | D(1) |
| Money supply | -2.78** | -5.37* | - | D(0) |

*Source: author's computations*

The ADF stationarity test revealed that inflation and money supply are stationary at level while petrol prices, exchange rate and interest rates were found to be stationary after first differencing. Electricity tariffs on the other hand, were found to be stationary after second differencing. Table 3 below provides a summary of findings from the VAR estimation. The Akaike Information Criterion (AIC) recommended one lag.

**Table 3: VAR Estimation**

| | Inflation | Petrol price | Electricity tariffs | Exchange rate | Interest rate | Money supply |
|---|---|---|---|---|---|---|
| Inflation (-1) | 0.41 | -0.25 | 0.04 | -0.03 | 0.17 | -0.54 |
| | (0.19) | (0.14) | (0.03) | (0.06) | (0.17) | (0.28) |
| | [ 2.09] | [-1.79] | [ 1.18] | [-0.48] | [ 1.00] | [-1.96] |
| Petrol price (-1) | 0.08 | 0.81 | 0.09 | 0.06 | -0.45 | -0.41 |
| | (0.20) | (0.14) | (0.03) | (0.07) | (0.18) | (0.28) |
| | [ 0.41] | [ 5.71] | [ 2.76] | [ 0.97] | [-2.51] | [-1.43] |
| Electricity tariffs (-1) | 0.03 | 0.07 | 0.93 | 0.09 | 0.22 | -0.12 |
| | (0.23) | (0.16) | (0.04) | (0.07) | (0.20) | (0.32) |
| | [ 0.13] | [ 0.46] | [ 24.05] | [ 1.24] | [ 1.08] | [-0.38] |
| Exchange rate (-1) | -0.49 | -0.13 | -0.07 | 0.74 | -0.03 | 0.12 |
| | (0.36) | (0.25) | (0.06) | (0.12) | (0.32) | (0.51) |
| | [-1.37] | [-0.51] | [-1.14] | [ 6.38] | [-0.08] | [ 0.24] |
| Interest rate (-1) | -0.29 | -0.15 | -0.01 | 0.13 | 0.04 | -0.46 |
| | (0.23) | (0.16) | (0.04) | (0.07) | (0.21) | (0.32) |
| | [-1.25] | [-0.95] | [-0.34] | [ 1.81] | [ 0.16] | [-1.41] |
| Money supply (-1) | 0.21 | 0.02 | -0.03 | 0.02 | 0.13 | 0.23 |
| | (0.16) | (0.11) | (0.03) | (0.05) | (0.14) | (0.22) |
| | [ 1.36] | [ 0.17] | [-1.31] | [ 0.34] | [ 0.98] | [ 1.02] |
| C | 1.41 | 1.78 | -0.05 | -0.28 | 2.78 | 5.89 |
| | (1.17) | (0.83) | (0.20) | (0.38) | (1.05) | (1.66) |
| | [ 1.20] | [ 2.16] | [-0.23] | [-0.74] | [ 2.64] | [ 3.54] |

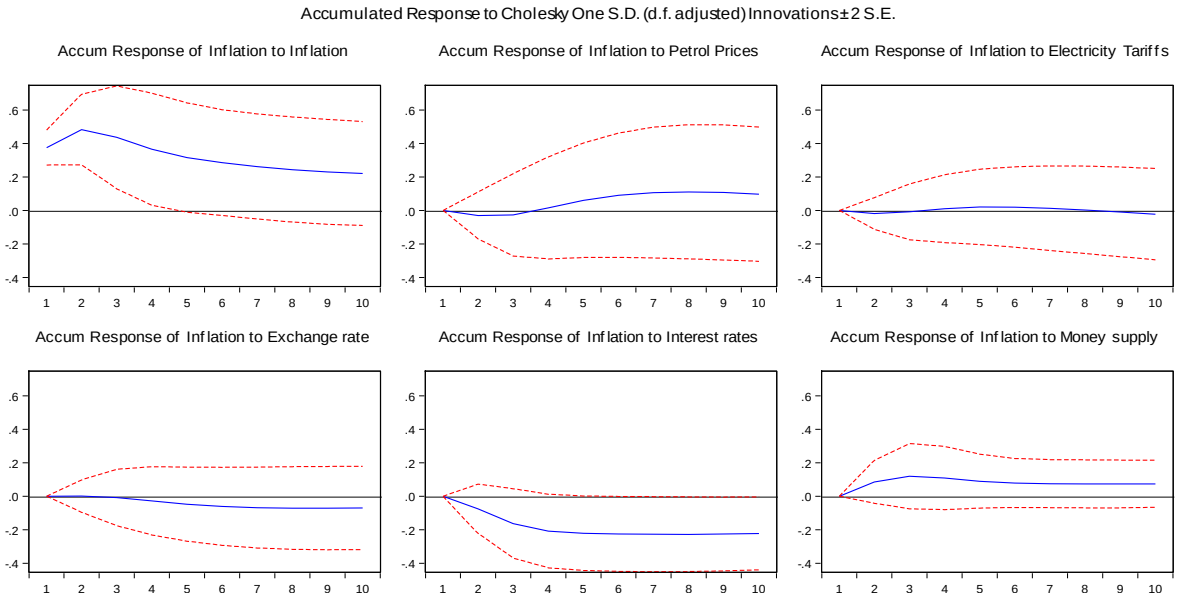
*Source: author's computations*

The findings from the VAR estimation indicate that petrol prices, electricity prices and money supply have a positive effect on the inflation rate. The rationale is that, increase in the

basic petrol price raises the fuel pump price and ultimately, public and private transport costs. Transports costs are factored into the cost of production and thus, increases in the price of fuel will presumably result in an increase in the total cost of production. Also, certain manufactures involved in the production of iron and steel, aluminium, chemicals and cement, make use of fuel. The same rationale applies to increases in electricity tariffs. Electricity forms a significant operational cost in most, if not all, industries. Thus, increases in electricity tariffs place upward pressure on production costs. This translates into increases in food prices. The combination of food and transport inflation leads to the rise in prices in general and consequently, headline inflation. These findings are in line with Rafiq (2014), Rangasamy (2017) and Balcilar et al., (2018) who analysed the impact of oil price shocks on inflation.

The exchange rate and interest rates were found to have a negative effect on inflation. This is because central banks make use of interest rates to curb inflation in the economy. When interest rates rise, the cost of borrowing increases, thus inducing debtors to make less use of credit facilities in fear of incurring higher interest charges. This results in less money circulation and credit purchases. The appreciation of the exchange rate negatively influences the domestic inflation rate. The reasoning is that, when the exchange rate increases, the exporting country becomes less competitive in the global market, holding other factors constant. As such, the quantity of goods and services demanded by foreign consumers decreases due to relatively higher prices as a result of the appreciation of the exchange rate. in contrast, money supply was found to move in the same direction as the inflation rate. Theoretically, an increase in the quantity of money in circulation triggers the demand for goods and services. When the increased demand for goods and services is not met by an equivalent increase in production, this leads to inflation. Following this, the impulse response function was executed to determine the response of inflation to shocks in explanatory variables. The findings are illustrated in Figure 01.

**Figure 01: Impulse Responses of Inflation**




*Source: author's computations*

The response of inflation to its own innovations was found to be positive over the entire period. This implies that previous values of inflation inform current inflation rates. The response of inflation to a one standard deviation in petrol prices and electricity tariffs was found to be negative in the short term and positive in the medium and long term. The negative response of inflation in the short run might be due to economic lags. Nonetheless, the response of inflation to innovations in the exchange rate and interest rate was found to be negative across the entire period, while on the contrary, the response of inflation to innovation in money supply was found to be positive in the short and long run. The estimated model was assessed for autocorrelation and heteroskedasticity.

**Table 4: Residual Diagnostics**

| Autocorrelation | | | Heteroskedasticity | | |
|---|---|---|---|---|---|
| Lags | LM-Stat | Prob | Chi-sq. | df. | Prob. |
| 1 | 45.99 | 0.16 | 254.69 | 252 | 0.44 |

*Source: author's computations*

The results indicated that the model is free from autocorrelation and heteroskedasticity. This is because, the probability values in both the autocorrelation and heteroskedasticity test were above 5%, thus confirming that the estimated model is free from spurious regression. The variance decomposition test was likewise performed to measure forecast errors of each variable in relation to its own shock. The results are summarised in table 5.

**Table 5: Variance Decomposition of Inflation**

| Period | S.E. | Inflation | Petrol price | Electricity tariffs | Exchange rate | Interest rate | Money supply |
|---|---|---|---|---|---|---|---|
| 1 | 0.38 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | 0.41 | 91.58 | 0.55 | 0.20 | 0.00 | 3.33 | 4.35 |
| 3 | 0.42 | 86.96 | 0.52 | 0.24 | 0.04 | 7.49 | 4.75 |
| 4 | 0.43 | 85.17 | 1.41 | 0.42 | 0.25 | 8.19 | 4.56 |
| 5 | 0.44 | 83.99 | 2.42 | 0.46 | 0.45 | 8.05 | 4.62 |
| 6 | 0.44 | 83.54 | 2.88 | 0.45 | 0.54 | 7.97 | 4.63 |
| 7 | 0.44 | 83.43 | 2.98 | 0.48 | 0.56 | 7.93 | 4.61 |
| 8 | 0.44 | 83.40 | 2.99 | 0.53 | 0.56 | 7.91 | 4.61 |
| 9 | 0.44 | 83.35 | 2.98 | 0.61 | 0.56 | 7.90 | 4.59 |
| 10 | 0.45 | 83.23 | 3.04 | 0.69 | 0.56 | 7.89 | 4.59 |

*Source: author's computations*

The results from the variance decomposition indicate that in the short run (1-3 years), variations in the inflation rate are largely explained by its own shocks while 7.5% and 4.7% of the variations are explained by shocks in interest rates and money supply, respectively. In the medium term (4-6 years), variations in inflation are explained by 83.5% of its own shocks, 2.9% by shocks in petrol prices, 7.9% by shocks in interest rates and 4.6% by shocks in money supply. Shocks in the exchange rate and electricity tariffs are found to have little to muted effects on variations in the inflation rate. In the long term (7-10 years), variations in the inflation rate remain largely explained by its own innovations and partially by innovations in money supply (4.6%), interest rates (7.9%) and petrol prices (3.0%). It is worth noting however that that the share of interest rate shocks in inflation appear to be increasing at a decreasing rate in the medium to long term. The granger causality test was executed to determine the direction of causality between the dependant and explanatory variables. The results are given in Table 6.

**Table 6: VAR Granger Causality/Block Exogeneity Wald Tests**

| Dependent variable: Inflation | | | |
|---|---|---|---|
| Excluded | Chi-sq. | df | Prob. |
| Petrol price | 0.17 | 1 | 0.68 |
| Electricity tariffs | 0.02 | 1 | 0.89 |
| Exchange rate | 1.89 | 1 | 0.16 |
| Interest rate | 1.57 | 1 | 0.21 |
| Money supply | 1.84 | 1 | 0.17 |
| All | 6.71 | 5 | 0.24 |

*Source: author's computations, asterisks ** indicate statistical significance at the 5% level*

The results in Table 6 indicate no evidence of causality between the dependent variable

and explanatory variables. This implies that past values of money supply, interest rates, electricity tariffs, exchange rates and petrol prices do not contain information that helps predict current and future values of inflation in the given period of study. The null hypothesis of no causality is thus accepted at the 5% significance level against the alternative hypothesis of causality.

## 5. Conclusion and recommendations

The primary goal of this study was to investigate the effects of energy prices on inflation in South Africa. This was achieved by means of econometric analysis comprising of the Vector autoregression model, impulse response function, variance decomposition and granger causality analysis. The study made use of annual time series data spanning from 1994 to 2020. The findings revealed that electricity tariffs and petrol prices exhibit a positive effect on inflation in South Africa. On the contrary, interest rates and the exchange rate as control variables were found to have a negative effect on the inflation rate. The impulse response function indicated that inflation responds positively to innovations in petrol prices, electricity tariffs and money supply in the medium and long term but responds negatively to innovations in interest rates and exchange rates. Further to this, the variance decomposition function revealed that variations in inflation are largely explained by its own innovations in the short, medium and long term and partially explained by innovations in petrol prices, money supply and interest rates. Lastly, the granger causality analysis showed no evidence of causality between the inflation rate and explanatory variables. Given that energy prices place upward pressure on inflation, the study recommends a review of the current fuel and electricity tariff structure to provide the much-needed relief to households and businesses.

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